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**PERMIT TO CONSTRUCT/CHANGE OF CONDITION
HEATER H-100**

COMPANY NAME

TESORO REFINING AND MARKETING CO
P.O. BOX 817, WILMINGTON, CA 90748-0817

EQUIPMENT LOCATION

2101 E. PACIFIC COAST HIGHWAY
WILMINGTON, CA 90744
Facility ID#: 800436
Facility Type: NOx & SOx RECLAIM (Cycle 1), Title V

EQUIPMENT DESCRIPTION

Additions are shown as **bold** and underlined and deletions are shown as ~~strikeouts~~.
Section H: Permit to Construct


Equipment	ID No.	Connecte d To	RECLAIM Source Type	Emissions and Requirements	Conditions
Process 2: Coking and Residual Conditioning					
System 2: : DCU Heaters					<u>S11.X</u>
HEATER, H-100, PROCESS GAS, REFINERY GAS, 252, <u>302.4</u> MMBTU/HR WITH A/N: 469243, <u>567439</u> <u>BURNER, REFINERY GAS, JOHN</u> <u>ZINK, MODEL MA-20, 36</u> <u>BURNERS TOTAL, 8.4</u> <u>MMBTU/HR EACH</u>	D33	D76 D77 C768 S987	NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981] <u>NOX: 18.40 lbs/hr (2)</u> <u>[RULE 2005, 5-6-2005] ;</u> <u>SOX: 14.08 lbs/hr (2) [RULE</u> <u>2005, 5-6-2005]</u>	<u>New: A63.XX,</u> <u>A63.YY, A99.X,</u> <u>A195.XX,</u> <u>A195.YY,</u> <u>D29.X</u> B61.1, D90.7, D328.1, E54.9, E54.17, H23.3

- | | |
|--|--|
| * (1) Denotes RECLAIM emission factor | (2) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emission limit |
| (5)(5A)(5B) Denotes command and control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |
- ** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

BACKGROUND

Overall Project

In June 2013, the Tesoro Refining & Marketing Company LLC (Tesoro) purchased the BP West Coast Products LLC (BP) Carson Refinery (currently termed the Tesoro Carson Operations). Tesoro plans to implement a project, known as the Los Angeles Refinery Integration and Compliance (LARIC) Project to


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integrate the operations at this site with the adjacent refinery which it owns since 2007 (currently termed Tesoro Wilmington Operations) to form the Tesoro Los Angeles Refinery (Refinery). The modifications will enable retiring the Fluid Catalytic Cracking Unit (FCCU) at the Wilmington Operations. The Project will also enable compliance with federal state and local rules and regulations and increased Refinery processing efficiency by upgrading and streamlining equipment. The proposed project will increase crude oil and feedstock processing capacity at the Wilmington site by approximately 2% or 6,000 BPD as a result of the proposed LARIC project.

The LARIC Project elements fall roughly into the following categories:

- Increase heat capacity of Coker Heater, H-100, from 252 MMBtu/hr to 302.4 MMBtu/hr. No physical modifications will be made to the heater, as the currently installed burners are capable of firing at the higher heat rate.
- Recovering and upgrading distillate range material from FCCU feeds to accommodate retiring the Wilmington Operations FCCU. Project elements include modifications to Carson Operations 51 Vacuum Unit and Hydrocracker Unit (HCU) and the Wilmington Operations HCU and Hydrotreating Unit No. 4 (HTU-4).
- Tier III gasoline compliance project elements enable further hydrotreating of naphtha in the Carson Operations Light Hydrotreating Unit (LHU) and Mid-Barrel Unit and the Wilmington Operations HTU-1 and HTU-2 to meet new EPA low sulfur requirements.
- Gasoline flexibility project elements restore gasoline production capability diminished by the retirement of the Wilmington FCCU and include the Carson Operations HTU#4 Unit modifications, repurposing the Iso-Octene debutanizer for use in the Naphtha Hydrodesulfurization Unit (NHDS) and the Liquefied Petroleum Gas (LPG) railcar unloading facilities.
- Interconnecting System (pipelines and metering stations), electrical Interconnection, heat integration project elements and retiring the Wilmington Operations FCCU.
- Additional facilities to regenerate sulfuric acid, improve jet fuel quality, upgrade and treat propane for commercial sales and upgrade LPG rail facilities to enable fast unloading of railcars.
- Constructing six new 500,000 barrel tanks at the Carson Crude Terminal and replacing two crude tanks at the Wilmington Operations with larger 300,000-barrel tanks.

Some of the above project elements are not currently proposed under applications. A number of applications (see below) have been submitted for equipment modifications associated with the Tesoro

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LARIC Project, at both the Tesoro Wilmington Operations and Tesoro Carson Operations. This evaluation is focused on only one of the modifications covered by Application Number 567439 for increasing the heater design rated capacity from 252 mmbtu/hr to 302.4 mmbtu/hr. Additional modifications to the Tesoro Wilmington and Carson Operations, which are being processed separately from this evaluation, include:

Tesoro Wilmington

- A/N 575873 – Title V/RECLAIM Permit Significant Revision;
- A/N 575874 for construction of a new refinery interconnection system (Process 19, System 7) providing piping/metering between LAR Wilmington and LAR Carson Operations;
- A/N 575875 for modification of the Flare System;
- A/N 575876 for modification of Hydrocracker Unit (Process 8, System 1).
- A/N 567619 for modification of Hydrotreater Unit No.4 (HTU#4) (Process 4, System 7).
- A/N 567617 – Title V/RECLAIM Permit Significant Revision;

Tesoro Carson

- A/N 567642- Title V/RECLAIM Permit Significant Revision;
- A/N 567643 for modification of No.51 Vacuum Distillation Unit (Process 1, System 5);
- A/N 567645 for modification of No.1 Light Hydrotreating Unit (Process 5, System 4);
- A/N 567646 for modification of Naphtha Hydrodesulfurization (HDS) Unit (Process 5, System 5);
- A/N 567647 for modification of Alkylation Unit (Process 9, System 1);
- A/N 567648 for modification of LPG Rail Loading/Unloading Rack (Process 14, System 11)
- A/N 567649 for amendment of the permit for No.51 Vacuum Distillation Unit Heater (Device ID:D63);
- A/N 575836- Title V/RECLAIM Permit Significant Revision;
- A/N 575837-for construction of a new refinery interconnection system (Process 19, System 9) providing metering/piping between LAR Carson and LAR Wilmington Operations;
- A/N 575838- for modification of the ISO-Octene System (Process 9 , System9);
- A/N 575839-for the modification of the No.5 Flare System (Process 21, System6);
- A/N 575840 –for the modification of the Hydrocracker Flare System (Process 21, System 3);
- A/N 575841 –for the modification of the South Area Flare System (Process 21, System 1);
- A/N 578247- Title V/RECLAIM Permit Significant Revision;
- A/N 578248 for modification of Mid Barrel Desulfurizer Unit (Process 5, System 2);
- A/N 578249 for modification of the Hydrocracker Unit- Fractionation Section(Process 8, System 2)

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As mentioned above, the LARIC project will include the shutdown of the Fluid Catalytic Cracking (FCC) Unit at the Tesoro Wilmington Operations site and reductions in emissions of criteria pollutants and Toxic Air Contaminants (TACs) are expected as a result. According to the latest revision of the Environmental Impact Report (EIR) for this project, the FCCU shutdown is scheduled to occur in March/April, 2017. The equipment listed below, which serves the FCCU, will also be taken out of service. Combustion equipment to be shut down has a combined heat input rating of 559.3 MMBtu/hr.

- FCCU regenerator (FCCU coke burn), A/N 470269
- CO Boiler (300 MMBtu/Hr), A/N 470272
- H-2 Steam Superheater (37.4 MMBtu/Hr), A/N 469270
- H-3 Fresh Feed Heater (94.7 MMBtu/Hr), A/N 470270
- H-4 Hot Oil Loop Reboiler (127.2 MMBtu/Hr), A/N 470271
- H-5 Fresh Feed Heater (44 MMBtu/Hr), A/N 469272
- B-1 Startup Heater (84 MMBtu/Hr), A/N 473467

DCU Heater H-100 Permit History

Tesoro submitted the Heater H-100 application for increasing the heater design rated capacity from 252 mmbtu/hr to 302.4 mmbtu/hr.

See Table 1 below regarding the previous modifications and the permit history of the DCU Heater H-100 (D33).

Table 1- Heater H-100 (D33) Permit History

Permit To Construct		Permit To Operate		Description of the modification
No.	Issue date	No.	Issue date	
A-41290	6/22/1967	—	9/3/1968	Construct a new Coker Heater H-100 with maximum rated capacity of 252 mmbtu/hr
C-03108		P68337	10/19/1976	Burners modification for switching from gas burners to gas/oil burners using the same number of burners, with the same rated capacity 252mmbtu/hr, due to the increasing shortage of fuel gas.

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C-13815	12/22/77	M-14383	3/10/1981	To modify the heater by installing eight soot blowers – no change in the rated capacity.
136734		M48861	4/21/1986	Change of Ownership from Texaco Inc to Texaco Refining & Marketing Inc.
211800	7/19/1990	D89945	1/25/1995	To modify the heater by installing a Selective Catalytic Reactor (SCR) system to comply with Rule 1109 requirements and meet a limit of 0.03 lb/mmbtu based on rated capacity of 252 mmbtu/hr. The SCR was under application no 234955.
335229	2/20/1998	F12372		To add the bypass condition of the heater to operate the heater during the SCR maintenance periods.
346427		F17855	11/13/2002	Change of Ownership from Texaco Refining & Marketing Inc. to Equilon Enterprises LLC
389220		F88426	7/3/2001	To tag the NSPS 40CFR60 Subpart J limit to the heater to comply with the Consent Decree that was issued to Equilon on March 21, 2001.
469243	—	G1620	2/27/2009	Change of Ownership from Equilon to Tesoro Refining & Marketing Co

COMPLIANCE RECORD REVIEW

A two year printout of the facility's compliance history is shown in Attachment 1. All NOV's issued to this facility are listed as either in compliance or are closed. There are no open NOV's currently.

FEE SUMMARY**Table 2 – Summary of Permit Processing Fees**

A/N	Submittal Date	Equipment	Schedule	Processing Fee	XPP Fee	Total Fee
567439	8/12/2014	Change of Conditions Heater H-100	E	\$5,826.56	\$2,913.28	\$8,739.84
567438	8/12/2014	TV/RECLAIM Administrative Application	Rule 301 (k)(5)	\$1,909.72	---	\$1,909.72
Total						\$10,649.56

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PROCESS DESCRIPTION


Heater H-100 is the Delayed Coking Unit (DCU) Charge feed heater. It is a fuel-gas fired heater designed to elevate the temperature of the heater charge prior to entry into the Main Fractionator for separation into light, intermediate and heavy components. The DCU charge is a mixture of crude oil, residual from the crude unit, slop oil and FCCU main fractionator bottoms .

As part of the proposed Los Angeles Refinery Integration and Compliance project, Tesoro proposes to revise the device description of heater H-100 design heat release from 252 MMBTU/hr to 302.4 MMBTU/hr. **No physical modifications will be made to the heater**, as the currently installed burners are capable of firing at the higher heat rate. Based on the original burner specifications dated 2/1/1967, there were 36 burners with 8.4 mmbtu/hr for each burner in the heater.

This revision to the heater equipment description has the potential to increase the crude oil throughput to the Refinery by up to two percent (or up to 6,000 bbl/day). The increased heat release from the H-100 heater and/or increased crude oil throughput is anticipated to occur once the modified permit is issued. Therefore, the draft environment impact report (DEIR) evaluated the impacts from the increase in crude throughput of up to 6,000 bbl/day.

Heater H-100 was built in 1967. At that time, it was equipped with 36 John Zink VBMR-20 gas burners. In 1976, the burners were replaced with 36 John Zink MA-20 burners; each burner having a maximum duty of 8.4 MMBTU/hr. However, the permitted heat capacity was at 252 MMBTU/hr which was based on the lower heating value (LHV) of the fuel of 975, not the higher heating value (HHV) at 1230 btu/scf. The information supporting the maximum firing capacity of the initial and current burners for this heater are included in Attachment B of the permit application package included in this folder. The burners have not been changed since 1976.

In the early 1990s, the heater was equipped with a Selective Catalytic Reduction (SCR) (C768) system to control NOx emissions to comply with Rule 1109 with a NOx limit of 0.03 lb per mmbtu/hr at the same time, fuel oil firing capacity was removed. After RECLAIM was adopted , this limit was dropped from the permit as Rule 1109 was subsumed by RECLAIM in accordance with Rule 2001(j); however, the SCR system was retained in the permit under device C768.

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Also note that no changes are required to be made to the SCR as part of this application. The SCR was already designed based on a higher firing rate of 302.4 MMBTU/hr; therefore, no application for SCR was needed with the heater change of conditions.

EMISSIONS CALCULATIONS

Tesoro Refinery is a RECLAIM facility. NO_x and SO_x are subject to RECLAIM new source review under Rule 2005, while VOC, PM₁₀, and CO are subject to Regulation XIII -New Source Review.

Based on the above history, heater H-100 was modified post 10/8/1976, and was thus subject to the NSR. The PTE calculations for H-100 in the past applications were based on oil/gas firing. Since this heater is no longer permitted to fire oil (oil firing capability seems to have been removed around the time of SCR installation), the current PTE must be based only on current fuel (refinery/process gas). Review of previous applications does not show any baseline calculations that were done based on gas firing only. Therefore, we now have to establish the NSR baseline for this heater for refinery/process gas firing only, using the appropriate emission factors.

- *NO_x and SO_x- are subject to RECLAIM New Source Review under Rule 2005. According to 2005(d), “An increase in emissions occurs if a source's maximum hourly potential to emit immediately prior to the proposed modification is less than the source's post-modification maximum hourly potential to emit”. The source's maximum hourly potential to emit immediately prior to the proposed modification (change of condition) will be based on the maximum hourly RECLAIM data for the last 12 months prior to modification. Tesoro submitted the NO_x and SO_x RECLAIM data for the 12 months period immediately prior to the application deemed complete date of August 20, 2014. The maximum hourly emission from the above data was used for the calculations below.*
- *VOC, PM₁₀, and CO are subject to Regulation XIII -New Source Review.*
As post-NSR equipment, emission increases were calculated per Rule 1306, specifically §(d)(2)(A) which is the post-modification potential to emit minus the permitted or allowable pre-modification potential to emit.



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Table 3: Total Heater Duty

	Pre-Modification	Post-Modification
Rating, MMBtu/hr	252	302.4
Operation, Hours/day	24	24
Refinery fuel Higher heating value, Btu/ft ³	1,230	1,230
Calculated Maximum daily fuel usage, mmft ³ /hr	0.200	0.246

PRE MODIFICATION EMISSIONS

Based on RECLAIM data:

The reported maximum NO_x and SO_x hourly emissions for the last 12 months immediately prior modifications are from August 20, 2013 to August 20, 2014.

Maximum NO_x hourly emissions

The maximum hourly NO_x Emissions is 18.19 lb/hr on October 16, 2013 @11:00 hour at firing rate of 249.13 MMBtu/hr.

The corrected maximum hourly NO_x emissions at 252 MMBtu/hr = $18.19 \times (252/249.13)$
= 18.40 lb/hr

Maximum SO_x hourly emissions

The maximum hourly SO_x Emissions is 13.86 lb/hr on February 11, 2014 @ 05:00 hour at firing rate of 248.13 MMBtu/hr.

The corrected maximum hourly NO_x emissions at 252 MMBtu/hr = $13.86 \times (252/248.13)$
= 14.08 lb/hr

Baseline Emissions for H-100 Heater (based on 252 MMBtu/hr)


Pollutant	Emission Factor	Hourly, lbs/hour	Daily, lbs/day
NO _x , lb/hr	RECLAIM data	18.40 ⁽¹⁾	181.44⁽³⁾
SO _x , lb/hr	RECLAIM data	14.08 ⁽¹⁾	250⁽³⁾
CO, lb/MMscf fuel	35 ⁽²⁾	7.2	174
PM10, lb/MMscf fuel	7.5 ⁽²⁾	1.54	37
ROG, lb/MMscf fuel	7.0 ⁽²⁾	1.43	35

⁽¹⁾ Based on hourly emissions for the last 12 months as submitted by Tesoro (see Attachment 3)

⁽²⁾ Based on the District's Default Emission Factors for Refinery Fuel Gas

⁽³⁾ The daily emissions for NO_x and SO_x are the daily emissions used for the modeling in the CEQA document in Appendix B-3 Table A-3. To ensure compliance with the daily NO_x and SO_x emissions, the permit will include condition A.63.YY limiting the above daily emissions.

Tesoro has agreed to limit the emissions from this heater to the pre-modification (@252 MMBtu/hr) levels even after the rating is increased to 302.4 MMBtu/hr. Thus, the baseline emissions calculated above at 252 MMBtu/hr will also apply at the new rating of 302.4 MMBtu/hr. Additionally, Tesoro

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has also agreed to accept a limit for the emission rating (lb/MMBtu) for each non-RECLAIM criteria pollutants. The emission rating limit is calculated as shown below:

New Emissions Rating - Post-Modification @ 302.4 MMBtu/hr

Pollutant	Emissions, lb/day @302.4 MMBtu/hr (same as @ 252 MMBtu/hr)	Emission Rating, lb/MMBtu⁽¹⁾	Emission Rating, lb/MMft³(²)
PM10	37	0.00510	6.3
ROG	35	0.00482	5.9
CO	174	0.02397	29.6

⁽¹⁾ Based on 302.4 MMBtu/hr using Emissions at 252 MMBtu/hr= (lb/day)/24/302.4

⁽²⁾ Based on 302.4 MMBtu/hr using Emissions at 252 MMBtu/hr= (lb/day)/24/302.4*1230


Therefore, for NSR applicability, the following emissions limit will be used, based on Rule 2005 for NOx, SOx, and Rule 1303 for CO, PM10 and ROG:

Table 4: Summary of Emissions and Emission Rates @302.4 MMBtu/hr

Pollutant	Emissions
NOx	18.40 lb/hr
SOx	14.08 lb/hr
CO	174 lb/day 0.002397 lb/MMBtu
PM ₁₀	37 lb/day 0.00510 lb/MMBtu
ROG	35 lb/day 0.00482 lb/MMBtu

Although Tesoro proposes to revise the device description of this heater, Tesoro does not propose to increase the potentials to emit for this heater. Based on engineering evaluations, source testing and other monitoring systems, Tesoro believes the emissions from this heater when described at 302.4 MMBTU/hr, will remain below the baseline emissions listed above.

To ensure compliance with baseline emissions, the permit will include conditions limiting the emissions rate (lb/MMBtu) and daily emissions (lb/day) for PM10, CO, and VOC, and hourly (lb/hr) for NOx and SOx. **Condition 29.4 will be added** for Tesoro to perform a source test within 180 days of receiving the revised permit to construct, and annually thereafter, in order to demonstrate compliance with the above emission limits and emission rates.

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RULES EVALUATION

STATE REGULATIONS

<i>California Environmental Quality Act (CEQA)</i>	
	<p>The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed “projects” be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. The Los Angeles Refinery Integration and Compliance (LARIC) Project qualifies as a Significant Project, therefore, preparation of a CEQA document was required. The District is the lead agency in this analysis and has the principal responsibility for carrying out and approving the project. The draft EIR for the “Tesoro Los Angeles Refinery Integration and Compliance Project” is expected to be circulated for public comment in January, 2016 and to be certified by the District after completion of public comments.</p> <p>The final Environmental Impact Report (EIR) will be certified prior to the issuance of any of the subject permits to construct. The permits will be issued with a condition (S11.x) that specifies that Tesoro Wilmington Refinery shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which will be part of the SCAQMD Certified Final EIR .</p>

SCAQMD REGULATIONS

<i>Rule 212</i>	<i>Standards for Approving Permits</i>	<i>June 5, 2015</i>
	<p>212 (a) The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. The operation of Heater H-100 is expected to comply with this requirement.</p>	



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212(c)(1)

Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. The source is not within 1000 feet of a school, public notification is therefore not required.

212(c)(2)

Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The emissions from this LARIC project as a whole will exceed the daily maximums specified in subdivision (g). Therefore, prior to granting Permits to Construct for LARIC Project, **a public notice will be prepared by the District**. This public notice will be distributed to each address within a ¼ mile radius of the project, a local newspaper publication, as well as those parties listed in subdivision (g) of the rule, including EPA (Region 9), California Air Resources Board, City of Los Angeles (Wilmington), County of Los Angeles, State Land Manager, and Federal Land Manager.

Air Contaminant	R212(g) Daily Maximum Threshold (lb/day) ⁽¹⁾
VOC	30
NO _x	40
PM ₁₀	30
SO _x	60
CO	220
Lead	3

⁽¹⁾ Increase in 30-day average potential to emit

212(c)(3)

Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1×10^{-6}), due to a project's new construction or proposed modification. The modification/change of condition for Heater H-100 does not result in MICR exceeding one in a million, public notification is therefore not required. See Rule 1401 evaluation below for further details.



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212(d)

This section states the requirements for distribution of the public notice. For projects in which a public notice is required due to an emission increase exceeding daily maximum stated under 212(g) or where a person may be exposed to a MICR exceeding one in a million, the applicant shall be responsible for distribution of the public notice to each address within a ¼ mile of the project.

212(g)

This section describes the scope of dissemination of a public notice for a new or modified unit which results in an emissions increase exceeding limits stated above. This includes a District analysis of the effect on air quality to be viewed at one location in the affected area, prominent advertisement in the affected area, and mailing of the notice to the US EPA, the affected state, and local government agencies. A 30 day period shall be maintained for submittal/receipt of public comments. Public noticing for this project will be carried out to meet the requirements stated under this section.



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Rule 401	Visible Emissions	November 9, 2001
	<p>This rule specifies that a person shall not discharge emissions from a source for a period or periods aggregating more than three minutes in any one hour which are as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or emissions of such opacity that it obscures an observers view to an equal or greater level. This is equivalent to opacity of 20%.</p> <p>The heater is operated such that the discharge of any air contaminant which has opacity greater than Ringelmann number 1 for a period or periods aggregating more than three minutes is not expected. Continued compliance with Rule 401 is expected.</p>	
Rule 402	Nuisance	May 7, 1976
	<p>This rule requires that a person not discharge from any source air contaminants or material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property. No nuisance complaints are expected from the change of conditions. Therefore, the equipment is not expected to create public nuisance problems. Continued compliance is expected.</p>	
Rule 404	Particulate Matter-Concentration	February 7, 1986
	<p>This rule sets forth particulate mater emission standards based on the gas discharge rate. Typically, equipment which fires on gaseous fuel can meet these standards. This heater is fired on refinery gas only.</p> <p>By interpolation, the Rule 404 particulate matter concentration limit for heater H-100 is 0.045828 gr/scf and is based on the following estimated gas exhaust rate</p> <p><i>The maximum stack flow rate is</i> = $302.4 \text{ mmbtu/hr} \times (F\text{Factor})$ = $302.4 \text{ mmbtu/hr} \times (8592 \text{ dscf}/10^6 \text{ btu})$ = $259,8221 \text{ scfh}/60$ = $43,304 \text{ dscfm}$</p> <p><i>Grain loading</i> = $\frac{37.37 \text{ lb/day} \times (7000 \text{ gr/lb})}{259,8221 \text{ scfh} \times 24 \text{ hr/day}}$ = 0.004195 gr/scf</p>	



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The expected concentration (*0.004195 gr/scf*) is well below the concentration limit (*0.045828 gr/scf*). Compliance will be verified through the source test according to condition D29.X. Continue compliance with Rule 404 is expected.

Rule 407	<p><i>Liquid and Gaseous Air Contaminants</i> <i>April 2, 1982</i></p> <p>This rule limits CO emissions to 2,000 ppm, averaged over 15 consecutive minutes. Condition D328.1 is tagged to the heater and a source test performed in March 2014 showed the actual measured CO concentration to be 4.52 ppmv corrected to 3% oxygen, which is well below 2,000 ppm. By increasing the fired heater duty to 302.4 MMBtu/hr, the CO emissions are not expected to exceed the 2,000 ppm limit. Therefore, continued compliance is expected.</p>
Rule 409	<p><i>Combustion Contaminants</i> <i>August 7, 1981</i></p> <p>This rule limits particulate matter emissions to 0.1 gr/cf of gas, averaged over a minimum of 15 consecutive minutes.</p> <p><i>Estimated exhaust gas:</i> <i>43,304 scf/min = 2,598,221 scf/day</i></p> <p><i>Estimated PM emission rate:</i> <i>37.37 lb/day</i></p> <p><i>Grain loading</i> = $\frac{37.37 \text{ lb/day} \times (7000 \text{ gr/lb})}{2,598,221 \text{ scf/day}} = 0.0042 \text{ gr/scf}$</p> <p>The grain loading is well below the concentration limit of 0.1 gr/cf. Compliance will be verified through the annual source test. Continue compliance with Rule 404 is expected.</p>
Rule 431.1	<p><i>Sulfur Content Of Gaseous Fuels</i> <i>June 12, 1998</i></p> <p>Tesoro is a SOx RECLAIM facility. In accordance with Rule 2001(j), Rule 431.1 was subsumed by RECLAIM. Therefore, the SOx limits do not apply to this facility.</p>
Rule 1109	<p><i>Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries</i> <i>August 5, 1988</i></p> <p>Tesoro refinery is a NOx RECLAIM facility, and the requirements of Rule 1109 have been subsumed by the RECLAIM per Rule 2001(j). Therefore, the NOx limits under this rule do not apply to this facility.</p>

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Rule 1146	<i>Emissions of Oxides of Nitrogen From Industrial, Institutional, And Commercial Boilers, Steam Generators, And Process Heaters</i> November 1, 2013
	<p>This rule applies to boilers, steam generators, and process heaters of equal to or greater than 5 million Btu per hour rated heat input capacity used in all industrial, institutional, and commercial operations with the exception of:</p> <ol style="list-style-type: none">(1) Boilers used by electric utilities to generate electricity; and(2) Boilers and process heaters with a rated heat input capacity greater than 40 million Btu per hour that are used in petroleum refineries; and(3) Sulfur plant reaction boilers.(4) RECLAIM facilities (NOx emissions only)
	<p>Heater H-100 is rated at 252 mmBtu/hr which is greater than 40 mmbtu/hr and Tesoro refinery is a NOx RECLAIM facility, Therefore, the NOx and CO limits under this rule do not apply to this heater.</p>

REG XIII	<i>New Source Review</i>
Rule 1303	<i>Requirements</i> December 6, 2002
	<p>This rule states that the Executive Officer shall deny a permit to construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source.</p> <p>Tesoro Refinery is a RECLAIM facility. NOX and SOX are subject to RECLAIM new source review under Rule 2005, while VOC, PM10 and NH3 are subject to Regulation XIII - New Source Review.</p> <p>Although Tesoro proposes to revise the device description of heater H-100 design heat release rate from 252 MMBTU/hr to 302.4 MMBTU/hr without physical modifications to the heater, Tesoro does not propose to increase the potentials to emit for this heater. Based on engineering evaluations, source testing and other monitoring systems, the emissions (and emissions rate) from this heater when</p>



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described at 302.4 MMBTU/hr will remain below the baseline emissions at 252.4 MMBtu/hr. The baseline emissions limits will be added to the permit under condition A63.xx. Since this change of conditions will not result in an emissions increase of criteria air pollutants, NSR, BACT provisions and air quality modeling are not triggered .

REG XIV	Toxics and Other Non-Criteria Pollutants	
Rule 1401	New Source Review of Toxic Air Contaminants	June 5, 2009
	<p>Requirements – Rule 1401 contains the following requirements:</p> <ol style="list-style-type: none"> 1) <i>(d)(1) MICR and Cancer Burden</i> - The cumulative increase in MICR which is the sum of the calculated MICR values for all toxic air contaminants emitted from the new, relocated or modified permit unit will not result in any of the following: <ul style="list-style-type: none"> (A) an increased MICR greater than one in one million (1.0×10^{-6}) at any receptor location, if the permit unit is constructed without T-BACT; (B) an increased MICR greater than ten in one million (1.0×10^{-5}) at any receptor location, if the permit unit is constructed <i>with T-BACT</i>; (C) a cancer burden greater than 0.5. 2) <i>(d)(2) Chronic Hazard Index</i> - The cumulative increase in total chronic HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location. 3) <i>(d)(3) Acute Hazard Index</i> - The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location. <p><u>Analysis – Permit Unit Basis:</u></p> <p>Under this rule, a health risk assessment (HRA) must be performed for each individual permit unit for which there is an increase in TACs. Tesoro calculated the toxic emissions from the increase of 252 MMBtu/hr to 302.4 MMBtu/hr and it was verified by the district engineer. (See Attachment E of the submitted information by Tesoro and Attachment 3 of this evaluation).</p> <p>Based on the calculations, the cumulative increase in maximum individual cancer risk (MICR) from this permit unit does not exceed one in a million. For target organ systems, neither the cumulative increase in total chronic hazard index (HIC) nor the total acute</p>	



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hazard index (HIA) exceeds 1.0 for any target organ system. Table below summarizes the results of the Tier 2 Risk Assessment for MICR/Chronic Hazard Index and Acute Hazard Index respectively. Attachment E of the facility submittal (included in the permit folder) provides the Risk Calculations which was verified by the District.

Summary of Tier 2 Risk Assessment Analysis for Heater H-100

	Receptor Risk(Offsite Worker)	Receptor Risk(Residential)
<i>MICR</i>	<i>6.73E-07</i>	<i>3.49E-07</i>
<i>HI Chronic</i>	<i>1.58E-01</i>	<i>1.67E-02</i>
<i>HI Acute</i>	<i>5.06E-03</i>	<i>7.26E-04</i>

Project Basis: A Health risk assessment (HRA) was performed for CEQA compliance (not for Rule 1401), to determine if emissions of TACs generated by the LARIC Project, as a whole, would exceed SCAQMD significance thresholds for cancer risk and hazard indices. The HRA of the project can be found in Appendix B of the EIR.

REG XX

RECLAIM

Rule 2005

New Source Review for RECLAIM

June 3, 2011

As described above under Reg XIII discussion, Tesoro has agreed to accept permit limits such that the potential to emit for this heater H-100 will remain unchanged from increasing the firing rate to 302.4 MMBtu/hr. The emission limits for the RECLAIM pollutants NO_x and SO_x were determined, as shown above in the Emissions Calculation section, using the maximum hourly emissions for the past 12 months immediately prior to the modification (application deemed complete date), per section (d) of this rule. These limits will be added to the permit under Emissions and Requirements. Thus, no increase in NO_x and SO_x emission is expected, and this application is not subject to RECLAIM NSR.

Rule 2011

Requirements For Monitoring, Reporting, And Recordkeeping For Oxides Of Sulfur (SO_x) Emissions

May 6, 2005

This rule establishes the monitoring, reporting, and recordkeeping requirements for SO_x emissions under the RECLAIM program.

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(a) Purpose	This heater H-100 is subject to this rule.
(b) Applicability	Major SOx Source
(c) Requirements	<p>(1) This heater H-100 is currently classified as a major SOx source.</p> <p>(2) Tesoro is in compliance with the requirements of this paragraph as shown below: The measured variables are as follows: 1. The fuel supply line of the heater has continuous fuel flow monitor and 2. Stack SOx concentration and all other applicable variables specified in Table 2011-1 and Appendix A, Chapter 2, Table 2-A.</p> <p>CEMS is allowed a 96-hour non-operational time for maintenance and repair.</p> <p>(3) Tesoro is in compliance with the requirements of this paragraph as shown below:</p> <ul style="list-style-type: none">• Total daily mass SOx emissions and daily status codes of the CEMS for the heater is reported to the District's Central SOx Station through a remote terminal unit (RTU) on a daily basis, and in accordance to the requirements specified in this paragraph.• Tesoro has submitted Monthly Emission Report aggregating SOx emissions from all major sources at this facility within 15 days following the end of each calendar month.• In an event that the RTU is malfunctioned preventing the SOx emissions and daily status codes by 5:00 pm, Tesoro is required to submit a report within 96 hours of the breakdown provided raw data is stored at the facility.• Tesoro is not required to use Missing Data Procedures if the failure to report was due to the District's Central SOx Station. However, Missing Data Procedures must be used if the raw data for calculating the missing SOx emissions are not submitted within 48 hours. <p>(4) through (8) Super compliant facility. (Not applicable)</p> <p>(9) Infrequently-Operated major SOx sources. (Not applicable)</p> <p>(10) Non-operated major SOx sources. (Not applicable)</p> <p>(11) One-time only CEMS certification for an infrequently-operated or non-operated major SOx major. (Not applicable)</p> <p>(12) Loss of infrequently-operated or non-operated major SOx source status. (Not applicable).</p> <p>The heater meets all applicable requirements of this rule. Compliance expected.</p>

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Rule 2012	Requirements For Monitoring, Reporting, And Recordkeeping For Oxides Of Nitrogen (NO_x) Emissions	May 6, 2005
(a) Purpose	This rule establishes the monitoring, reporting, and recordkeeping requirements for NO _x emissions under the RECLAIM program.	
(b) Applicability	This heater H-100 is subject to this rule.	
(c) Requirement	<p>Major NO_x Source</p> <p>(1) The heater H-100 is currently classified as a major NO_x source, its maximum rated capacity is 252 mmbtu/hr which is greater than 40 mmbtu/hr.</p> <p>(2)(A) Tesoro is in compliance with the requirements of this paragraph as shown below:</p> <p>The measured variables are as follows: 1. Continuous fuel flow rate monitor and 2. Stack NO_x concentration and all other applicable variables specified in Table 2012-1 and Appendix A, Chapter 2, Table 2-A.</p> <p>CEMS is allowed a 96-hour non-operational time for maintenance and repair.</p> <p>(3) Tesoro is in compliance with the requirements of this paragraph as shown below:</p> <ul style="list-style-type: none">• Total daily mass NO_x emissions and daily status codes of the CEMS for the heater is reported to the District's Central NO_x Station through a remote terminal unit (RTU) on a daily basis, and in accordance to the requirements specified in this paragraph.• Tesoro has submitted Monthly Emission Report aggregating NO_x emissions from all major sources at this facility within 15 days following the end of each calendar month.• In an event that the RTU is malfunctioned preventing the NO_x emissions and daily status codes by 5:00 pm, Tesoro is required to submit a report within 96 hours of the breakdown provided raw data is stored at the facility.• Tesoro is not required to use Missing Data Procedures if the failure to report was due to the District's Central NO_x Station. However, Missing Data Procedures must be used if the raw data for calculating the missing NO_x emissions are not submitted within 48 hours. <p>(4) through (8) Super compliant facility. (Not applicable)</p>	

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BC/TV(9) Infrequently-Operated major NO_x sources. (Not applicable)(10) Non-operated major NO_x sources. (Not applicable)(11) One-time only CEMS certification for an infrequently-operated or non-operated major NO_x major. (Not applicable)(12) Loss of infrequently-operated or non-operated major NO_x source status. (Not applicable).

The heater is in compliance with all applicable requirements of this rule.

REG XVII***Prevention of Significant Deterioration (PSD)******October 7, 1988***

This rule applies to pollutants for which attainment with ambient air quality standards has been achieved in the South Coast Air Basin. These include NO₂, SO₂, CO and PM₁₀. The South Coast Air Basin is designated as non-attainment for VOC, which is a precursor for ozone, and PM_{2.5} (particulate matter with an aerodynamic diameter of less than 2.5 micron). As the subject equipment, Heater H-100 emits PSD pollutants (NO₂, SO₂, CO and PM₁₀), it is subject to the requirements of this rule.

Criteria pollutants designated as “attainment” with federal ambient air quality standards are regulated by this PSD regulations and Title 40 of the Code of Federal Regulations (CFR) § 52.21. SCAQMD implements Regulation XVII under a partial delegation agreement between the District and U.S. Environmental Protection Agency (EPA) Region IX. Under this delegation agreement, any PSD ~~non-applicability~~ analysis which uses emissions reductions (i.e., the Step 2 “netting” procedure- i.e. contemporaneous emissions reductions from removal of equipment from service.) to ensure that project emissions remain below PSD significance thresholds must be evaluated under 40 CFR § 52.21 provisions and not Regulation XVII. As the PSD applicability analysis for the LARIC project utilizes “netting”, Tesoro has prepared the PSD applicability analysis in accordance with the provisions of 40 CFR § 52.21. for this project considering emissions from both the Wilmington Operations and Carson Operations. The PSD applicability determination has been submitted to the U.S. EPA for review. The final determination is pending; issuance of permits for this project is contingent on the EPA’s determination.



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REG XXX

Title V Operating Permits

The Tesoro LAR Wilmington facility is subject to Reg XXX. An initial Title V permit was issued on 11/23/2009, and renewed on June 02, 2015. Since the Tesoro LARIC Project involves modification of existing equipment resulting in an emissions increase, although there is no increase of emissions from Heater H-100, it is considered a **Significant Revision** of the Title V permit, under Rule 3000. As a Significant Revision, the applications are subject to the requirements for a 30 day public notice and a 45 day EPA review and comment period.

Rule 3006 addresses public notice requirements. It requires that a public notice be published in a newspaper serving the county where the source is located, or that a notice be sent by mail to those who request in writing to be on a list, and any other means as determined by the Executive Officer to ensure adequate notice to the affected public. This rule requires that the notice contain the following:

The identity and location of the affected facility;

The name and mailing address of the facility's contact person;

The identity and address of the South Coast Air Quality Management District as the permitting authority processing the permit;

The activity or activities involved in the permit action;

The emissions change involved in any permit revision;

The name, address, and telephone number of a person whom interested persons may contact to review additional information including copies of the proposed permit, the application, all relevant supporting materials, including compliance documents as defined in paragraph (b)(5) of Rule 3000, and all other materials available to the Executive Officer which are relevant to the permit decision;

A brief description of the public comment procedure; and,

The time and place of any proposed permit hearing which may be held, or a statement of the procedure to request a proposed permit hearing if one has not already been requested.



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The SCAQMD plans to meet all public notice and EPA review and comment requirements for this project. Compliance with this regulation is expected.

PART 3 FEDERAL REGULATIONS

Regulation IX: Standards of Performance for New Stationary Sources (NSPS)

Subpart J	Standards of Performance for Petroleum Refineries
§60.100	<i>Applicability, designation of affected facility, and reconstruction.</i> Since the heater is a fuel combustion device, the heater is subject to this subpart.
§60.104(a)(1)	<i>Standards for sulfur oxides.</i> The operator shall not burn in the heater any fuel gas that contains hydrogen sulfide (H ₂ S) in excess of to 0.10 grains/dscf or 160 ppm . Tesoro operates two H ₂ S CEMS on their fuel gas system. A check of the H ₂ S CEMS data recorded that was submitted by John Shao of Tesoro in an email on September 16, 2015 at 5:17 pm from April, 1, 2013 till June 30, 2015 shows the daily average H ₂ S was below 160 ppm(the highest daily average was 46 ppm on March 2, 2015) . Therefore, the refinery complies with this subpart.
§60.105(a)(4)	<i>Monitoring of emissions and operations.</i> Tesoro operates two H ₂ S CEMS on their fuel gas system. The 88-AI-942 CEMS analyzes all treated fuel gas that is normally used within the refinery for heater and boiler fuel gas combustion and other process purposes. The 88-AI-945 CEMS analyzes all treated fuel gas that is normally sent directly to the flare for combustion purposes. Each of these analyzers was installed to demonstrate compliance with 40CFR 60.104(a)(1) and 60.105(a)(4)-Monitoring of emissions and operations. Tesoro will continue to comply with all requirements for fuel gas combustion devices subject to 40 CFR 60 Subpart J.

Regulation X: National Emission Standards for Hazardous Air Pollutants (NESHAPS)

40 CFR Part 61 -- Subpart FF	National emission standard for benzene waste operations
§61.340	<i>Applicability</i> Tesoro Refinery is subject applicable requirements of this subpart. However, this heater not is associated benzene waste operation at this facility, and therefore, this subpart does not apply.



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40 CFR 64	<i>Compliance Assurance Monitoring</i>
	<p>CAM is applicable to an emissions unit at a Title V facility which is: subject to an emissions limitation or standard, uses a control device to achieve compliance with the emissions limitation or standard, and has a potential-to-emit exceeding or meeting the Title V major source threshold for the pollutant. CAM requirements do not apply if one of the following exemption criteria apply:</p> <ul style="list-style-type: none">• The equipment does not use a control device to comply with emission limitation or standard (as required under §64.2(a)(2)).• Pre-control emissions from the equipment are below the major source threshold (as required under §64.2(a)(3)).• The equipment meets the exemption under §64.2(b)(i), in that the emission limitation or standard was proposed by the Administrator after November 15, 1990.• The equipment meets the exemption under §64.2(b)(vi), in that the emissions limitation or standard specifies a continuous compliance determination method. <p>Heater H-100 emit NOX ,SOX, CO and VOC</p> <p>Compliance of NOX and SOX emissions limit is subject to monitoring requirement under RECLAIM and therefore, exempt from the requirements of this provision pursuant to §64.2(b)(vi).</p> <p>There is no add-on control equipment used to meet the CO and the VOC limit, and CAM would not apply for both pollutants.</p> <p>Thus, CAM does not apply to the subject equipment.</p>

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CONCLUSION/RECOMMENDATIONS

The H-100 Heater Change of Conditions covered under this application are expected to comply with all applicable District Rules and Regulations. Therefore, a Permit to Operate is recommended subject to the following conditions (additions to the conditions are noted in underlines and deletions are noted in ~~strikeouts~~):

PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, SUBPART	FF

[40CFR61 Subpart FF, 12-4-2003]

[Processes subject to this condition: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 15]

SYSTEM CONDITIONS

S11.X The following conditions shall apply to all refinery operation and related devices from this system:

- The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Final Environmental Impact Report dated “ DATE TBD”for this facility
- The operator shall maintain records in a manner approved by the District , to demonstrate compliance with the applicable measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document.
- This condition shall only apply to equipment listed in Section H of this facility permit

[CA PRC CEQA, 09-15-2015]

[Systems subject to this condition : Process 2, System 2, Process 4, System 7]

DEVICE CONDITIONS

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BC/TV**A. Emission Limits**

A63.XX The operator shall limit emissions from this equipment as follows:

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>PM10</u>	<u>Less than or equal to 37 lbs in any one day</u>
<u>PM10</u>	<u>Less than or equal 0.00510 Lb/MMBtu</u>
<u>ROG</u>	<u>Less than or equal to 35 lbs in any one day</u>
<u>ROG</u>	<u>Less than or equal to 0.00482Lb/MMBtu</u>
<u>CO</u>	<u>Less than or equal to 174 lbs in any one day</u>
<u>CO</u>	<u>Less than or equal to 0.02397Lb/MMBtu</u>

The operator shall calculate the daily emissions and the emission rate in lb/MMBtu for ROG, PM10 and CO using the results of the most recent source test.

[RULE 1303(b)(2)-Offset, 5-10- 1996; RULE 1303(b)(2)-Offset, 12-6-2002.

[Devices subject to this condition : D33]

A63.YY The operator shall limit emissions from this equipment as follows:

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>NOx</u>	<u>Less than or equal to 181.44 lbs/day</u>
<u>SOx</u>	<u>Less than or equal to 250 lbs/day</u>

The operator shall calculate the daily emissions for NOx and SOx using the the SCAQMD certified CEMS.

[CA PRC CEQA, 09-15-2015]

[Devices subject to this condition : D33]

A99.X The 18.40 lb/hr NOX emission limit(s) shall not apply during the heater startup, shutdowns or refractory dryout periods. For the purpose of this exception, each startup event shall not exceed 48 hours, not including refractory dryout period up to 48 additional hours and each shutown event shall not exceed 24 hours.

Written records of start-ups , refractory dryouts and shutdowns shall be maintained and made available upon request from the Executive Officer or his designee.

[RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition : D33]



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A195.XX The 18.40 lbs/hr NOX emission limit(s) is averaged over rolling 24-hours.

This NOx hourly emission limit shall be calculated based on the measured NOx emissions using a certified RECLAIM CEMS.

RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition : D33]

A195.YY The 14.08 lbs/hr SOX emission limit(s) is averaged over rolling 24-hours.

This SOx hourly emission limit shall be calculated based on the measured SOx emissions using a certified RECLAIM CEMS.

RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition : D33]

B61.1 The operator shall not use fuel gas containing the following specified compounds:

Compound | ppm by volume

H2S greater than | 160

The H2S concentration shall be based on a rolling 3-hour average.

[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE, 3-21-2001]]

[Devices subject to this condition : D9, D32, D33,D89, D90, D91,D112, D120,D146,D157, D158, D194, D196, D214, D215, D216, D217,D218, D247, D248, D249, D250, D251, D384, D386, D387, D388, D722, D723, D724, D725, D770, D777, D1122]

D. Monitoring/Testing Requirements

D29.XX The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	Approved District Method	District –approved averaging time	Outlet of the SCR
SOX emissions	Approved District Method	District –approved averaging time	Outlet of the SCR
PM10	Approved District Method	District –approved averaging time	Outlet of the SCR
ROG	Approved District Method	District –approved averaging time	Outlet of the SCR



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CO	District method 100.1	District –approved averaging time	Outlet of the SCR
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The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the test shall record the fuel flow rate (CFH) and the flue gas flowrate.

The test shall be conducted when this equipment is operating at 80 percent or greater of the maximum design capacity.

For NO_x and SO_x, source test data may be substituted with CEMS data from a RECLAIM certified CEMS.

The test shall be conducted to demonstrate compliance with the emission limits specified in condition A63.XX and A63.YY for this equipment.

The test shall be conducted annually after the initial source test.

[RULE 1303(b)(2)-Offset, 5-10- 1996; RULE 1303(b)(2)-Offset, 12-6-2002, RULE 2005, 5-6-2005]

[Devices subject to this condition : D33]

D90.7 The operator shall continuously monitor the H₂S concentration in the fuel gases before being burned in this device according to the following specifications:

The operator may monitor the H₂S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H₂S in the fuel gas being burned in this device.


The operator shall use Gas Chromatograph meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D9, D32, D33,D89, D90, D91,D112, D120,D146,D157, D158, D194, D196, D214, D215, D216, D217,D218, D247, D248, D249, D250, D251, D384, D386, D387, D388, D722, D723, D724, D725, D770, D777, D1122]

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD method 100.1 or 10.1; or (b)

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conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with CO emission limit(s). The operator shall comply with all general testing, reporting, and recordkeeping requirements in sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition : D9, D32, D33,D89, D90, D91,D112, D120,D146,D157, D158, D194, D196, D214, D215, D216, D217,D218, D247, D248, D249, D250, D251, D384, D386, D387, D388, D722, D723, D724, D725, D770, D777, D1122]

E. Equipment Operation/Construction Requirements

E54.9 The operator is not required to vent this equipment to the following equipment if any of the requirements listed below are met:

Device ID: C768 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: The heater is in either start-up or shutdown mode.

Requirement number 2: The SCR inlet temperature is less than 550 Deg F.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D33]

E54.17 The operator is not required to vent this equipment to the following equipment if all of the requirements listed below are met:

Device ID: C768 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: Bypass is allowed for activities directly related to repair, maintenance, and the resetting of the damper following a stack damper trip


Requirement number 2: The CEMS shall be fully operational and certified to the levels of emissions with and without bypass

Requirement number 3: Total periods of bypass do not exceed 240 hours per year

Requirement number 4: The operator shall submit an annual report to the District with a summary of the number of hours the SCR was bypassed, and the description of the reason for each bypass. The annual report is due March 1 of each year

[**RULE 2012, 5-6-2005**]

[Devices subject to this condition: D33]

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H. Applicable Rules

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

CONTAMINANT	RULE	RULE/SUBPART
H2S	40CFR60, SUBPART	J

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D9, D32, D33,D89, D90, D91,D112, D120,D146,D157, D158, D194, D196, D214, D215, D216, D217,D218, D247, D248, D249, D250, D251, D384, D386, D387, D388, D722, D723, D724, D725, D770, D777, D1122]

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Attachments

1.	NOV's and NC's Issued
2.	NOx and SOx data for 12 months (August 2013-August 2014)
3.	Rule 1401 analysis